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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/625,384	07/26/2000	Richard A. Mueller	C-3128/1	8631

7590 03/29/2004

Pharmacia Corporation
Corporate Patent Department
P O Box 5110
Chicago, IL 60680

EXAMINER	
ROBINSON, BINTA M	
ART UNIT	**PAPER NUMBER**
1625	

DATE MAILED: 03/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)
09/625,384	Mueller et al.
Examiner	**Art Unit**
Celia Chang	1625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *Nov 13, 2003*.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-99* is/are pending in the application.

4a) Of the above, claim(s) *1-18 and 38-99* is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *19-37* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
4) ☐ Interview Summary (PTO-413) Paper No(s). _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

Detailed Action

The examiner acknowledges the applicant's an appeal brief, filed11/13/04.

The Finality of the Office Action is withdrawn at paper no. 12. in view of the new evidence submitted in the brief.

The brief has been treated as an argument/response to the rejection at paper no. 12.

The alleged impropriety of the restriction is not appealable since the applicant's did not file a petition challenging the restriction.

The applicant traverses the restriction requirement asserting that genus created by the examiner for examination purposes makes no sense, alleging that the group does not exist, because 't', 'R20', and 'R21' do not appear in Formula I. The applicant then goes on to assert that 't', 'R20' and 'R21' do exist in Formula II, but that t cannot be 2 in Formula II, thus the natural genus created by the examiner is allegedly erroneous. However, the examiner notes that the natural genus created around the elected species at paper no. 9 was not based on formula I. The examiner stated at paper no. 9 that Genus I was drawn to a compound of formula II in claim 19. where t can be 0 to 1, not 2.

The applicant then goes on to allege that the elected species, example 22 does not fit into the natural genus. However, the examiner notes that the elected species does fit into the natural genus of group I because R3 of formula II can equal alkyl, t can equal 1, R1 can equal alkyl, R20 and R21 can equal alkyl, Y1 can equal Oxygen, R6

can equal H, R2 can equal alkylthioaryl, and R4 and R5 can form a nitrogen heterocyclic ring. All of these moieties define the moieties contained in example 22.

In the instant case the different inventions have achieved a separate status in the art, have separate fields that aren't coextensive, and are capable of supporting separate patents. Further, a prior art reference that would anticipate the claims under 35 USC 102(b) would not render obvious the same claim(s) under 35 U. S. C. 103 (a) with respect to another member. Searching the entire genus would be a burden on the USPTO in terms of time and expense. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper. This restriction is made FINAL.

Claims 1-99 are pending in the case. Claims 1-18 and 38-99 stand withdrawn as a result of a restriction requirement. Claims 19-37 are examined below as they read on a compound of formula II where t is 0 to 2, R20 represents radicals as defined for R1 except amino acid side chains claimed, R21 represents radicals as defined for R1 except the amino acid side chains claimed, R2 is as claimed, R' represents radicals defined for R3 except heterocycloalkyl, heteroaryl, heterocycloalkylalkyl and heteroaralkyl radicals, R5 is H, alkyl, R4 and R5 come together with nitrogen to which they are attached to form a hydrogenated isoquinoline ring which includes D, E, F when Q is q.

(old rejections)

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 33 in part is rejected under 35 U. S. C. 112, first paragraph for reasons of record at paper no. 7. Specifically, since the claimed invention is not supported by either a specific asserted utility or a well established utility, one skilled in the art clearly would not know how to use the claimed invention. Inhibiting a retroviral protease is a mechanism. The disease being treated by this inhibition is not stated. The specification must contain one practical utility in currently available form. The inhibition of an enzyme must be related to a disease that needs to be improved and this disease needs to be recited. There is no reasonable assurance that these will have all of the alleged properties since applicant does not show these compounds encompassing the wide Markush group are correlated to the treatment of specific diseases. The applicant is referred to In re Fouche 169 USPQ 429 ccpa, 1971, MPEP 716.02 B. The applicant is also referred to In re Wands, 858 F. 2d 731, 737, 8 USPQ 2d 1400, 1404 (Fed. Cir. 1988) which includes the incorporation of the 8 factors recited in Ex parte Foreman 230 USPQ 546 (Bd. Of App. And Inter. 1986).

In *In re Wands*, 8 USPQ2d 1400 (1988), factors to be considered in determining whether a disclosure meets the enablement requirement of 35 U.S.C. § 112, first paragraph, have been described. They are:

1. the nature of the invention,
2. the state of the prior art,
3. the predictability or lack thereof in the art,
4. the amount of direction or guidance present,
5. the presence or absence of working examples,

6. the breadth of the claims,
7. the quantity of experimentation needed, and
8. the level of the skill in the art.

The Nature of the Invention

The nature of the invention in claim 34 is the treating of HIV infection and retroviral infection.

The state of the prior art and the predictability or lack thereof in the art

The state of the prior art is that it involves screening in vitro and in vivo to determine which compounds exhibit the desired pharmacological activities on particular retroviruses. The state of the prior art is that it involves screening *in vitro* and *in vivo* to determine which compounds exhibit the desired pharmacological activities (i.e. what compounds can treat which specific disease). There is no absolute predictability even in view of the seemingly high level of skill in the art. The existence of these obstacles establishes that the contemporary knowledge in the art would prevent one of ordinary skill in the art from accepting any therapeutic or preventive regimen on its face.

The instant claimed invention is highly unpredictable as discussed below:

In re Fisher, 427 F.2d 833, 166 USPQ 18 (CCPA 1970) indicates that the more unpredictable an area is, the more specific enablement is necessary in order to satisfy the statute. In the instant case, treating of retroviruses is unpredictable.

It is the state of the art that there is no known drug that can treat all retroviruses. In terms of HIV treatment, there are drugs known as protease inhibitors that inhibit HIV viral replication. See page 187 of Biology, edited by Richard Robinson, Vol. 1, A-D, 2002 (See Reference U).

Hence, in the absence of a showing of this one drug as claimed being able to treat all retroviruses or even the HIV, one of skill in the art is unable to fully predict possible results from the administration of the compound of claim 6 on the treatment of all retroviruses or even HIV alone.

The amount of direction or guidance present and the presence or absence of working examples

The specification does not give any direction or guidance for the effect of the compound of claim 34 on the treatment of retroviruses other than HIV.

The breadth of the claims

The breadth of the claims is the treatment of all retroviruses with the compound of claim.

The quantity of experimentation needed

The quantity of experimentation needed is undue experimentation. One of skill in the art would need to determine what retroviruses out of all retroviruses would be benefited by treatment with the compound claimed in claim 34. Even though the level of skill in the antiviral therapy art is very high, based on the unpredictable nature of the invention and state of the prior art and the extreme breadth of the claims and lack of guidance and direction for treatment of any retrovirus, including HIV, one skilled in the art could not use the claimed invention without undue experimentation.

The level of the skill in the art

The level of skill in the art is high. However, due to the unpredictability in the art, it is noted that each embodiment of the invention is required to be individually assessed for

physiological activity by in vitro and in vivo screening to determine which retroviruses can be treated in desired fashion by the claimed compound.

The specification fails to provide sufficient support of the broad use of the compound of the claim 34 for the treatment of any retrovirus. As a result, necessitating one of skill to perform an exhaustive search for which retroviruses can be treated by the compound of claim 34 in order to practice the claimed invention.
The claims also do not indicate the route of administration of the compound for antiviral treatment. Is the route of administration in vitro or in vivo?

Genentech Inc. v. Novo Nordisk A/S (CA FC) 42 USPQ2d 1001 , states that " a patent is not a hunting license. It is not a reward for search , but compensation for its successful conclusion" and "[p]atent protection is granted in return for an enabling disclosure of an invention, not for vague intimations of general ideas that may or may not be workable".

Therefore, in view of the Wands factors and In re Fisher (CCPA 1970) discussed above, to practice the claimed invention herein, a person of skill in the art would have to engage in undue experimentation to test which retroviruses can be treated by the compound encompassed in the instant claims, with no assurance of success.

the level of predictability in the art

Treating retroviruses is unpredictable. Treating one retrovirus does not imply that one skilled in the art can treat all retroviruses. Viral treatment is viral or condition-specific. See page 187 of Biology, edited by Richard Robinson, Vol. 1, A-D, 2002 (See Reference U).

So the treatment of HIV by the compound claimed in claim 6 and 7 does not predict the treatment of another virus. By viral treatment does the applicant mean that the antiviral agent will kill the virus so that the cell will become healthy, or that antiviral agent will destroy the virus's mechanism and ability to attach to a healthy cell?

Additionally, the eighth Wands factor of the quantity of experimentation needed to make or use the invention based on the content of the disclosure is not satisfied. Undue experimentation would be required to make or use the invention based on the content of the disclosure due to the breadth of the claims, the level of predictability in the art of the invention, and the poor amount of direction provided by the inventor. Taking the above factors into consideration, it is not seen where the instant claims are enabled by the instant specification.

2 The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 37 in part are rejected under 35 U. S. C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

B. In claim 37, line 3, page 185, the phrase "in combination with other drugs" is indefinite. Which other drugs is the applicant claiming?

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is

most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 19-37 in part are rejected under 35 U.S.C. 112, first paragraph, because the specification, does not reasonably provide enablement for the radicals R3 equaling all heterocyclic rings and R4 and R5 coming together with the nitrogen atom to which they are bonded to form all nitrogen heterocyclic rings. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims. The claims as recited are broader than the scope of enablement. The specification lacks direction or guidance for placing all of the alleged products in the possession of the public without inviting more than routine experimentation. The applicant is referred to ***In re Wands***, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988) which includes the incorporation of the 8 factors recited in ***Ex parte*** Foreman 230 USPQ 546 (Bd. Of App. And Inter 1986).

There are many factors to be considered when determining whether there is sufficient evidence to support a determination that a disclosure does not satisfy the enablement requirement and whether any necessary experimentation is "undue". These factors include 1)the breadth of the claims, 2) the nature of the invention, 3) the state of the prior art, 4) the level of one of ordinary skill, 5) the level of predictability in the art 6) the amount of direction provided by the inventor 7) the existence of working examples, and 8) the quantity of experimentation needed to make or use the invention based on the content of the disclosure. In re Wands, 858 F. 2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988).

In terms of the breadth of the claims R3 and R4 and R5 encompass much wider Markush groupings of radicals than those radicals tested which for R3 consists of methyl, and for R4 and R5 saturated isoquinoline. The nature of the invention of these compounds is that they are HIV protease inhibitors. In terms of the fifth Wands factor, the level of predictability in the art is low since only one compound falling within the elected restriction group were only tested for enzyme inhibition, antiviral activity, and cell toxicity, where the R3 is methyl, and the R4 and R5 come together to form saturated isoquinoline. The amount of direction provided by the inventor is poor, since the applicant only conducts tests for one compound falling within the elected group, where R3 is methyl, and the R4 and R5 come together to form saturated isoquinoline. The applicant does not test the whole breadth of compounds encompassing all of the moieties that these particular radicals can be. In terms of the seventh Wands factor, the applicant only provides one working example that falls within the elected group of compounds.

In terms of the 8th Wands factors, undue experimentation would be required to make or use the invention based on the content of the disclosure due to the breadth of the claims, the level of predictability in the art of the invention, and the poor amount of direction provided by the inventor. Taking the above factors into consideration, it is not seen where the instant claim is enabled by the instant application.

(new rejection)

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 19-37 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. There is not sufficient description of what prodrugs or esters and derivatives of the compound of formula II in claim 19 and all other occurrences is being claimed. A prodrug, ester or derivative is not the same chemical species as the compound of formula II. In the absence of how to make prodrugs, esters, or derivatives of the compounds of formula I being claimed, there is no umbrella coverage springing forth from the claim compound of formula I and the few examples of prodrugs, esters, and derivatives depicted in the specification.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 34 is rejected under 35 U.S.C. 112, first paragraph, because the specification, does not reasonably provide enablement for a method of treating all retroviruses or for even treating HIV. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims. The scope of the claims fail to meet the requirements of enablement and directional guidance. There is

no reasonable showing that the compound of form I would be able to treat all possible retroviruses.

The specification lacks direction or guidance for placing all of the alleged products in the possession of the public without inviting more than routine experimentation. The applicant is referred to ***In re Fouche*** 169 USPQ 429 ccpa, 1971, MPEP 716.02 B. The applicant is referred to ***In re Wands***, 858 f.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988) which includes the incorporation of the 8 factors recited in ***Ex parte Foreman*** 230 USPQ 546 (Bd. Of App. And Inter 1986).

There are many factors to be considered when determining whether there is sufficient evidence to support a determination that a disclosure does not satisfy the enablement requirement and whether any necessary experimentation is "undue". These factors include 1)the breadth of the claims, 2) the nature of the invention, 3) the state of the prior art, 4) the level of one of ordinary skill, 5) the level of predictability in the art 6) the amount of direction provided by the inventor 7) the existence of working examples, and 8) the quantity of experimentation needed to make or use the invention based on the content of the disclosure. In re Wands, 858 F. 2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988).

The Nature of the Invention

The nature of the invention is the treatment of retroviruses (claim 6) and specifically the treatment of HIV (claim 7).

The state of the prior art and the predictability or lack thereof in the art

The state of the prior art is that it involves screening in vitro and in vivo to determine which compounds exhibit the desired pharmacological activities on particular retroviruses. The state of the prior art is that it involves screening *in vitro* and *in vivo* to determine which compounds exhibit the desired pharmacological activities (i.e. what compounds can treat which specific disease). There is no absolute predictability even in view of the seemingly high level of skill in the art. The existence of these obstacles establishes that the contemporary knowledge in the art would prevent one of ordinary skill in the art from accepting any therapeutic or preventive regimen on its face.

The instant claimed invention is highly unpredictable as discussed below:

In re Fisher, 427 F.2d 833, 166 USPQ 18 (CCPA 1970) indicates that the more unpredictable an area is, the more specific enablement is necessary in order to satisfy the statute. In the instant case, treating of retroviruses is unpredictable.

It is the state of the art that there is no known drug that can treat all retroviruses. In terms of HIV treatment, there are drugs known as protease inhibitors that inhibit HIV viral replication. See page 187 of Biology, edited by Richard Robinson, Vol. 1, A-D, 2002 (See Reference U).

Hence, in the absence of a showing of this one drug as claimed being able to treat all retroviruses or even the HIV, one of skill in the art is unable to fully predict possible results from the administration of the compound of claim 6 on the treatment of all retroviruses or even HIV alone.

The amount of direction or guidance present and the presence or absence of working examples

The specification does not give any direction or guidance for the effect of the compound of claim 34 on the treatment of all retroviruses. The specification only shows the effects of the compound on an in vitro assay of HIV viral infection, but not on other specific viruses.

The breadth of the claims

The breadth of the claims is the treatment of all retroviruses with the compound of claim.

The quantity of experimentation needed

The quantity of experimentation needed is undue experimentation. One of skill in the art would need to determine what retroviruses out of all retroviruses would be benefited by treatment with the compound claimed in claim 35. Even though the level of skill in the antiviral therapy art is very high, based on the unpredictable nature of the invention and state of the prior art and the extreme breadth of the claims and lack of guidance and direction for treatment of retroviruses other than HIV, one skilled in the art could not use the claimed invention without undue experimentation.

The level of the skill in the art

The level of skill in the art is high. However, due to the unpredictability in the art, it is noted that each embodiment of the invention is required to be individually assessed for physiological activity by in vitro and in vivo screening to determine which retroviruses can be treated in desired fashion by the claimed compound.

The specification fails to provide sufficient support of the broad use of the compound of the claim 34 for the treatment of retroviruses other than HIV. As a result, necessitating one of skill to perform an exhaustive search for which retroviruses can be treated by the compound of claim 34 in order to practice the claimed invention. The claims also do not indicate the route of administration of the compound for antiviral treatment. Is the route of administration in vitro or in vivo?

Genentech Inc. v. Novo Nordisk A/S (CA FC) 42 USPQ2d 1001 , states that " a patent is not a hunting license. It is not a reward for search , but compensation for its successful conclusion" and "[p]atent protection is granted in return for an enabling disclosure of an invention, not for vague intimations of general ideas that may or may not be workable".

Therefore, in view of the Wands factors and In re Fisher (CCPA 1970) discussed above, to practice the claimed invention herein, a person of skill in the art would have to engage in undue experimentation to test which retroviruses can be treated by the compound encompassed in the instant claims, with no assurance of success.

the level of predictability in the art

Treating retroviruses is unpredictable. Treating one retrovirus does not imply that one skilled in the art can treat all retroviruses. Viral treatment is viral or condition-specific. See page 187 of Biology, edited by Richard Robinson, Vol. 1, A-D, 2002 (See Reference U).

So the treatment of HIV by the compound claimed in claim 34 does not predict the treatment of another virus. By viral treatment

does the applicant mean that the antiviral agent will kill the virus so that the cell will become healthy, or that antiviral agent will destroy the virus's mechanism and ability to attach to a healthy cell?

the quantity of experimentation needed to make or use the invention based on the content of the disclosure

In terms of the 8th Wands factors, undue experimentation would be required to make or use the invention based on the content of the disclosure due to the breadth of the claims, the level of predictability in the art of the invention, and the poor amount of direction provided by the inventor. Taking the above factors into consideration, it is not seen where the instant claim is enabled by the instant application.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 29-30 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. In claims 29-30, line 3, "R', R1, R6, R4, R5, R20, R21, t and Y' are as described herein" Is indefinite. The radicals R', R1, R6, R4, R5, R20, R21, t and Y' must be described at claim 30.

Applicant is advised that should claim 31 be found allowable, claim 32 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both

cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim(s) 30-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. In claim 30, line 3, of the response filed 11/13/04, the term "R4, R5" is ambiguous. How can R4 and R5 be defined as described herein, when they are limited to the substituted isoquinolinyl structure depicted at claim 30?

B. Claims 31 and 32 are indefinite because they are pharmaceutical composition claims tha do not make any reference to the dosage of the composition being administered.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 19-37 are are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,480,887 in view of US5,484,926.

Determination of the scope and content of the prior art (MPEP §2141.01)

Hornback et al. '887 generically disclosed the instant claimed compounds, see claim1 and species delineated by CAS124 attached to patent.

Ascertainment of the difference between the prior art and the claims (MPEP §2141.02)

The difference between Hornback '887 and the instant claims, especially claim 30 species, is the bicyclic ring system being tetrahydroqunolinyl of hexahydrothienopyridinyl ring system. Dressman et al. '926 is analogous art and taught that the tetrahydroqunolinyl of hexahydrothienopyridinyl ring system are optional choices for such compounds (see col. 2-8 with exemplification of col. 17-18).

Finding of prima facie obviousness---rational and motivation (MPEP§2142-2143)

One having ordinary skill in the art is deemed to be aware of all the pertinent art in the field. The above references placed the substituents containing R1, R20, and R2 as claimed and the optional choices of ring system in the possession of artisan in the field. The modification of a proven compound with attribute of another proven compound is considered prima facie obvious in absence of unexpected results.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Binta M. Robinson whose telephone number is (703) 306-5437. The examiner can normally be reached on M-F (9:30-6:00).

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Mr. Joseph McKane, can be reached at (703) 308-4537.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone numbers are (703) 308-1235 and (703) 308-0196.

A facsimile center has been established. The hours of operation are Monday through Friday, 8:45AM to 4:45PM. The telecopier numbers for accessing the facsimile machine are (703) 308-4242, (703) 305-3592, and (703) 305-3014.

Binta Robinson

March 26, 2004

CEILA CHANG
PRIMARY EXAMINER
GROUP 1200 1625